

The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A heat exchanger $[(1)]$ for cooling three cooling bodies, the heat exchanger $[(1)]$ comprising:

a first heat exchanger $[(9)]$ comprising a first heat radiating area $[(23)]$ arranged to receive a flow of a first cooling body and to radiate heat therefrom; and

a second heat exchanger $[(11)]$ comprising a second heat radiating area $[(25)]$ arranged to receive a flow of a second cooling body and to radiate heat therefrom and a third heat radiating area $[(27)]$ arranged to receive a flow of a third cooling body and to radiate heat therefrom; $[[wherein]]$

the second and third cooling bodies $[[are]]$ being disposed parallel to the respective second and third heat radiating areas $[(25,27)]$, and the second and third heat radiating areas $[(25,27)]$ are being disposed rearward of the first heat radiating area $[(23)]$, and

when $[[wherein,]]$ in use, the difference in temperature between the first cooling body entering the first heat radiating area $[(23)]$ and exiting the first heat radiating area $[(23)]$ is greater than the difference in temperature between the second cooling body entering the second heat radiating area $[(25)]$ and exiting the second heat radiating area $[(25)]$ and greater than the difference in temperature between the third cooling body entering the third heat radiating area $[(27)]$ and exiting the third heat radiating area $[(27)]$, and the temperature of the second cooling body flowing through the second heat radiating area $[(25)]$ is higher than the temperature of the third cooling body flowing through the third heat radiating area $[(27)]$, $[[and wherein]]$

the second heat radiating area [(25) is] being disposed on the upstream side of the flow direction of the first cooling body in the first heat radiating area [(23)], and the third heat radiating area [(27) is] being located on the downstream side of the flow direction of the first cooling body in the first heat radiating area [(23)].

2. (Currently Amended) The [(A)] heat exchanger [(1)] for cooling three cooling bodies, the heat exchanger [(1)] comprising:

a first heat exchanger [(9)] comprising a first heat radiating area [(23)] arranged to receive a flow of a first cooling body and to radiate heat therefrom; and

a second heat exchanger [(11)] comprising a second heat radiating area [(25)] arranged to receive a flow of a second cooling body and to radiate heat therefrom and a third heat radiating area [(27)] arranged to receive a flow of a third cooling body and to radiate heat therefrom;

[[wherein]] the second and third cooling bodies [[are]] being disposed parallel to the respective second and third heat radiating areas [(25,27)], and the second and third heat radiating areas [(25,27) are] being disposed rearward of the first heat radiating area [(23)], and wherein, in use,

the temperature of the first cooling body flowing through the first heat radiating area [(23) is] being higher than the temperature of the second cooling body flowing through the second heat radiating area [(25)], and the temperature of the second cooling body flowing through the second heat radiating area [(25) is] being higher than the temperature of the third cooling body flowing through the third heat radiating area [(27)], and [[wherein]]

the second heat radiating area [(25) is] being disposed on the upstream side of the flow direction of the first cooling body in the first heat radiating area [(23)], and the third

heat radiating area [(27) is] being located on the downstream side of the flow direction of the first cooling body in the first heat radiating area [(23)].

3. (Currently Amended) The [(A)] heat exchanger [(1)] according to [Claim 1 or Claim 2] claim 1, wherein

the area of the first heat radiating area [(23)] disposed on a first face [(2)] of the first heat exchanger [(9)] is substantially the same as the combined areas of the second and third heat radiating areas [(25,27)] disposed on a first face [(4)] of the second heat exchanger [(11)], the first faces [(2,4)] being arranged to receive an airflow [(A)], in use.

4. (Currently Amended) The [(A)] heat exchanger [(1)] according to [any preceding claim] claim 1, wherein

the first heat exchanger [(9)] is disposed substantially parallel to the second heat exchanger [(11)].

5. (Currently Amended) The [(A)] heat exchanger [(1)] according to [any preceding claim] claim 1, wherein

the second and third heat radiating areas [(25,27)] are disposed adjacent one another.

6. (Currently Amended) The [(A)] heat exchanger [(1)] according to [any preceding claim] claim 1, wherein

the second heat radiating area [(25)] is disposed between a first third heat radiating area portion [(27a)] and a second third heat radiating area portion [(27b)].

7. (Currently Amended) The [[A]] heat exchanger [[(1)]] according to [[any preceding claim]] claim 1, wherein

~~————— for use in a vehicle having an air conditioning unit (7), a fuel cell (3) and a drive motor (5), wherein~~

the first cooling body is arranged to transfer heat from [[the]] a vehicle air conditioning unit [[(7)]] to the first heat radiating area [[(23)]], the second cooling means is arranged to transfer heat from [[the]] a vehicle fuel cell [[(3)]] to the second heat radiating area [[(25)]], and the third cooling means is arranged to transfer heat from [[the]] a vehicle drive motor [[(5)]] to the third heat radiating area [[(27)]].

8. (Currently Amended) The [[A]] heat exchanger [[(1)]] according to [[Claim]] claim 7, wherein

when in use, [[, in use,]] the first cooling body flows from the air conditioning unit [[(7)]] to the first heat radiating area via a first cooling body inlet passageway [[(19)]], and from the first heat radiating area to the air conditioning unit [[(7)]] via a first cooling body outlet passageway [[(21)]], and

[[wherein]] the first heat exchanger [[(9)]] further comprises a first cooling body inlet [[(15)]] for receiving the first cooling body from the first cooling body inlet passageway [[(19)]], and a first cooling body outlet [[(17)]] for permitting the flow of the first cooling body out of the first heat exchanger [[(9)]] and into the first outlet passageway [[(21)]].

9. (Currently Amended) The [[A]] heat exchanger [[(1)]] according to
[[Claim]] claim 8, wherein

when in use, [[, in use,]] the second cooling body flows from the fuel cell [[(3)]] to the second heat radiating area via a second cooling body inlet passageway [[(33)]], and from the second heat radiating area to the fuel cell [[(3)]] via a second cooling body outlet passageway [[(35)]], and

[[wherein]] the second heat exchanger [[(11)]] further comprises a second cooling body inlet [[(29)]] for receiving the second cooling body from the second cooling body inlet passageway [[(33)]], and a second cooling body outlet [[(31)]] for permitting the flow of the second cooling body out of the second heat exchanger [[(11)]] and into the second cooling body outlet passageway [[(35)]].

10. (Currently Amended) The [[A]] heat exchanger [[(1)]] according to
[[Claim]] claim 9, wherein

the third cooling body is transferred from the drive motor [[(5)]] to the third heat radiating area via a third cooling body inlet passageway [[(41)]], and from the third heat radiating area to the drive motor [[(5)]] via a third cooling body outlet passageway [[(43)]], and

[[wherein]] the second heat exchanger [[(11)]] further comprises a third cooling body inlet [[(37)]] for receiving the third cooling body from the third cooling body inlet passageway [[(41)]], and a third cooling body outlet [[(39)]] for permitting the flow of the third cooling body out of the second heat exchanger [[(11)]] and into the third cooling body outlet passageway [[(43)]].

11. (Currently Amended) The [[A]] heat exchanger [[(1)]] according to
[[Claim]] claim 10, wherein

when in use, [[, in use,]] the relative temperatures of the cooling bodies at the first,
second and third cooling body inlets [[(15,29,37)]] are given by the relationship:
 $\text{Temperature}_{\text{first cooling body inlet}} > \text{Temperature}_{\text{second cooling body inlet}} > \text{Temperature}_{\text{third cooling body inlet}}$,
and

~~wherein~~ the relative temperatures of the cooling bodies at the first, second and third
cooling body outlets [[(17,31,39)]] are given by the relationship: $\text{Temperature}_{\text{second cooling body outlet}} > \text{Temperature}_{\text{third cooling body outlet}} > \text{Temperature}_{\text{first cooling body outlet}}$.

12. (Currently Amended) The [[A]] heat exchanger [[(1)]] according to [[any of
Claims 7 to 11]] claim 7, wherein

the second cooling body in the second heat radiating area [[(25)]] flows in a straight
line from an upper area of the vehicle to a lower area of the vehicle.

13. (Currently Amended) The [[A]] heat exchanger [[(1)]] according to [[any of
Claims 7 to 12]] claim 7, wherein

the third cooling body in the third heat radiating area [[(27)]] flows in a straight line
from an upper area of the vehicle to a lower area of the vehicle.

14. (New) The heat exchanger according to claim 2, wherein
the area of the first heat radiating area disposed on a first face of the first heat
exchanger is substantially the same as the combined areas of the second and third heat

radiating areas disposed on a first face of the second heat exchanger, the first faces being arranged to receive an airflow, in use.

15. (New) The heat exchanger according to claim 2, wherein the first heat exchanger is disposed substantially parallel to the second heat exchanger.

16. (New) The heat exchanger according to claim 2, wherein the second and third heat radiating areas are disposed adjacent one another.

17. (New) The heat exchanger according to claim 2, wherein the second heat radiating area is disposed between a first third heat radiating area portion and a second third heat radiating area portion.

18. (New) The heat exchanger according to claim 2, wherein the first cooling body is arranged to transfer heat from a vehicle air conditioning unit to the first heat radiating area, the second cooling means is arranged to transfer heat from a vehicle fuel cell to the second heat radiating area, and the third cooling means is arranged to transfer heat from a vehicle drive motor to the third heat radiating area.

19. (New) The heat exchanger according to claim 18, wherein when in use, the first cooling body flows from the air conditioning unit to the first heat radiating area via a first cooling body inlet passageway, and from the first heat radiating area to the air conditioning unit via a first cooling body outlet passageway, and

the first heat exchanger further comprises a first cooling body inlet for receiving the first cooling body from the first cooling body inlet passageway, and a first cooling body outlet for permitting the flow of the first cooling body out of the first heat exchanger and into the first outlet passageway.

20. (New) The heat exchanger according to claim 19, wherein
when in use, the second cooling body flows from the fuel cell to the second heat radiating area via a second cooling body inlet passageway, and from the second heat radiating area to the fuel cell via a second cooling body outlet passageway, and

the second heat exchanger further comprises a second cooling body inlet for receiving the second cooling body from the second cooling body inlet passageway, and a second cooling body outlet for permitting the flow of the second cooling body out of the second heat exchanger and into the second cooling body outlet passageway.

21. (New) The heat exchanger according to claim 20, wherein
the third cooling body is transferred from the drive motor to the third heat radiating area via a third cooling body inlet passageway, and from the third heat radiating area to the drive motor via a third cooling body outlet passageway, and

the second heat exchanger further comprises a third cooling body inlet for receiving the third cooling body from the third cooling body inlet passageway, and a third cooling body outlet for permitting the flow of the third cooling body out of the second heat exchanger and into the third cooling body outlet passageway.

22. (New) The heat exchanger according to claim 21, wherein
when in use, the relative temperatures of the cooling bodies at the first, second and
third cooling body inlets are given by the relationship: $\text{Temperature}_{\text{first cooling body inlet}} >$
 $\text{Temperature}_{\text{second cooling body inlet}} > \text{Temperature}_{\text{third cooling body inlet}}$, and
the relative temperatures of the cooling bodies at the first, second and third cooling
body outlets are given by the relationship: $\text{Temperature}_{\text{second cooling body outlet}} > \text{Temperature}_{\text{third}}$
 $\text{cooling body outlet} > \text{Temperature}_{\text{first cooling body outlet}}$.

23. (New) The heat exchanger according to claim 18, wherein
the second cooling body in the second heat radiating area flows in a straight line from
an upper area of the vehicle to a lower area of the vehicle.

24. (New) The heat exchanger according to claim 18, wherein
the third cooling body in the third heat radiating area flows in a straight line from an
upper area of the vehicle to a lower area of the vehicle.